

IN THE CLAIMS

What is claimed is:

1. A continuous positive airway pressure system, comprising:
an interface defining a plenum chamber therein, wherein the interface is
5 connectable to a ventilation circuit for delivering pressurized air to the plenum chamber;
and
a pair of nasal cannulas connected to and in fluid communication with the
interface, the nasal cannulas being configured and dimensioned to deliver pressurized air
to the nares of a patient, wherein each nasal cannula is capable of at least one of off axis
10 movement and off axis pivoting.
2. The continuous positive airway pressure system of claim 1, wherein at
least a portion of the interface is fabricated from elastic material.
- 15 3. The continuous positive airway pressure system of claim 2, further
including a conduit internally disposed within the interface, wherein the conduit extends
from the ventilation circuit to a location in close proximity to the nasal cannulas.
4. The continuous positive airway pressure system of claim 3, wherein the
20 conduit is flexible.
5. The continuous positive airway pressure system of claim 3, further
comprising an exhalation vent formed in a distal end of the interface.

6. The continuous positive airway pressure system of claim 5, wherein the exhalation vent is sized to allow more than two times the exhalation volume of the patient to pass therethrough on each exhalation of the patient.

5

7. The continuous positive airway pressure system of claim 6, further comprising a vent cover overlying the exhalation vent.

8. The continuous positive airway pressure system of claim 6, further comprising support stems disposed within the interface and about the nasal cannulas for maintaining the nasal cannulas in fluid communication with the plenum chamber.

10

9. The continuous positive airway pressure system of claim 6, further including a bonnet for mounting the system to the head of the patient.

15

10. The continuous positive airway pressure system of claim 9, wherein the bonnet includes a body portion and straps extending therefrom, the body portion including at least one slit formed therein.

20

11. The continuous positive airway pressure system of claim 10, wherein each strap includes one portion of a hook and loop fastener and the interface includes the other portion of the hook and loop fastener for releasably engaging the one portion of the hook and loop fastener.

12. The continuous positive airway pressure system of claim 6, wherein the interface includes an annular trough formed in a surface thereof and around each nasal cannula.

5

13. The continuous positive airway pressure system of claim 12, wherein the tip of each nasal cannula is fluted.

13. The continuous positive airway pressure system of claim 2, wherein the interface is fabricated from silicone.

10

14. The continuous positive airway pressure system of claim 1, wherein each nasal cannula is capable of at least one of off axis movement and off axis pivoting without kinking.

15

15. An interface for use in a continuous positive airway pressure system, the interface comprising:

a plenum chamber having an elastic portion configured and adapted to be in fluid communication with a source for delivering pressurized air;

nasal interface structure extending from the plenum chamber and in fluid communication therewith.

20

16. The interface according to claim 15, further including a conduit disposed within the plenum chamber.

17. The interface according to claim 16, wherein the conduit extends through the plenum chamber to a location in close proximity with the nasal cannulas.

18. The interface according to claim 17, further comprising an exhalation vent extending into the plenum chamber.

19. The interface according to claim 18, wherein the exhalation vent is sized to allow the escape of two times the exhalation volume of the patient therefrom with each exhalation of the patient.

20. The interface according to claim 19, wherein a distal end of the interface is provided with corrugations enabling the distal end of the interface to bend with respect to the remainder to the interface.

21. The interface according to claim 19, wherein the conduit is in fluid communication with a source of pressurized air.

20

22. The continuous positive airway pressure system of claim 15, wherein the elastic portions of the plenum chamber at least one of enhance and supplement the air pressure within the plenum chamber.

23. A method of treating with continuous positive airway pressure, comprising the steps of:

5 providing a continuous positive airway pressure system, the system comprising:

an interface defining a plenum chamber therein, wherein the interface is connectable to a ventilation circuit for delivering pressurized air to the plenum chamber; and

10 a pair of nasal cannulas connected to and in fluid communication with the plenum chamber of the interface, the nasal cannulas being configured and dimensioned to deliver pressurized air from the plenum chamber to the nares of a patient, each nasal cannula being capable of off axis displacement;

connecting the continuous positive airway pressure system to a source of pressurized air;

15 inserting the nasal cannulas into the nares of the patient; and

activating the source of pressurized air to supply positive air pressure to the nasal cannulas through the plenum chamber.

24. The method according to claim 23, wherein the interface includes an
20 exhalation vent formed therein for venting excess air pressure from the plenum chamber.